

MATH 230 - ANALYTIC GEOMETRY AND CALCULUS 2

Fall Semester 2016

INSTRUCTOR: Dr. Tsun-Zee Mai; **OFFICE:** Rm 224; **EMAIL:** tmai@scu.edu.cn

OFFICE HOURS: MTR 09:00 – 11:50am & MTWR: 1:00 – 4:00pm at Rm224, or by appointment.

LECTURES: WF: 8:15 – 9:55am at Rm216.

TEXTBOOK: *Briggs, Cochran, Lyle: Calculus, Early Transcendentals 2nd ed.*

DESCRIPTION: This is the first part of two-part calculus sequence for students in SCUPI. Topics are mainly focused on single variable calculus which include a review of limits and differential calculus, applications of integration, integration techniques, improper integrals, infinite series, and vectors and the geometry of space. 4 credit hours.

COURSE OBJECTIVES: Students will develop a good understanding of three dimensional vectors, the geometry of space. Students will acquire basic skills needed to apply integration techniques to solve a wide range of integration problems. Students will develop a basic understanding of infinite series and their applications. Evaluation of students will be determined by in-class presentation, quizzes, homework and test.

LEARNING OUTCOMES FOR THIS COURSE:

- 1) Students will develop a basic understanding of two and three-dimensional vectors, the geometry of the three-dimensional space, equations of lines and planes in three dimensions, and be able to apply these concepts when working applied problems.
- 2) Students will learn various techniques of integration.
- 3) Students will be able to apply integration techniques to solve a range of applied problems, including volume problems and applications from physics and other disciplines.
- 4) Students will develop a basic understanding of infinite series and their applications.

GRADE: The final grade will be based on the **score**. The score is a number determined by

Homework: 8% Quizzes: 10% Oral Presentation: 10% Major Exams: 47% Final Exam: 25%

The final letter grade is determined from the following table.

| | | | | | | |
|--------------|------------|-------------|-------------|------------|-------------|---------|
| A+: 98 – 100 | A: 92 – 98 | A–: 90 – 92 | B+: 88 – 90 | B: 82 – 88 | B–: 80 – 82 | |
| C+: 78 – 80 | C: 72 – 78 | C–: 70 – 72 | D+: 68 – 70 | D: 62 – 68 | D–: 60 – 62 | F: < 60 |

EXAMS: There are three 100 minutes major tests and a final exam Dates are given in the table below. Each major test will be cumulative with more emphasis on the material since the previous test. Each test may earn bonus points if the immediate subsequent test score is higher. The bonus is half of the difference of the two tests. There is no bonus for the final exam, but ***if your homework and quiz averages are 70 and above*** then the lowest adjusted test score may be replaced by the final exam score if the final is higher. Here is an example: if a student's grades are: quiz average (80), homework average (85), Oral Presentation (80), tests (70, 85, 70, 80), and final (78), then the adjusted test scores will be 78, 85, 75, 80 the lowest adjusted test score 75 is replaced by 78. Thus the student grade determination is $80 \times 10\% + 85 \times 8\% + 80 \times 10\% + (78+85+78+80)/4 \times 47\% + 78 \times 25\% = 80.02$, which is a B–. The final exam will be comprehensive. There is **NO** Make up for all the quizzes and exams.

Tentative exam dates are the following:

| | |
|--|--|
| TEST 1: The 9 th week of class (11/1) | TEST 2: The 13 th week of class (11/29) |
| TEST 3: The 17 th week of class (12/27) | FINAL: Monday, 1/9, 8:15am – 10:45am |

ORAL PRESENTATION GRADE: Presentation grade is determined by my evaluation score and the average of class quiz score which is held right after the presentation. *My evaluation criteria are: (1.) Use of English: 30% (2.) Preparation of the presentation: 30% (3.) Correctness: 40%.*

QUIZZES: In-class 10-minutes quiz will be given on some lecture days and after oral presentation.

HOMEWORK: There will be a graded homework assignment given on each section covered. They must be completed before each expiration date and time. **No extension will be given.** For each test period you will be allowed to drop one homework grade. The grade will be calculated by averaging the remaining homework scores. **Homework can be worked on until all questions are correct. Be aware that some of the homework problems do not have the learning aids. You can select similar question for any question that you miss and try again until you get it correct.**

CLASSROOM RULES: Electronic devices including but not limited to iphone, smartphone, ipod, ipad, pc are **NOT** allowed, except for course work.

ATTENDANCE: You are expected to attend all the classes; however, I will not check the attendance. A student who misses a class is responsible for finding out what was covered in the class. Remember there are no make ups all grades related activities.

MAKE-UP POLICY: **No makeup work will be allowed.** The dropped grade in each test period is to account for any missed assignments due to illness or any other circumstances.

CODE OF ACADEMIC CONDUCT: All students in attendance at the Sichuan University are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University expects from its students a higher standard of conduct than the minimum required to avoid discipline. Academic misconduct includes all acts of dishonesty in any academically related matter and any knowing or intentional help or attempt to help, or conspiracy to help, another student. The Academic Misconduct Disciplinary Policy will be followed in the event of academic misconduct.

NON-ACADEMIC MISCONDUCT: All cell phones and other electronic devices are to be turned off and out of sight while you are in the classroom. All newspapers and other materials not related to the class are to be put away once class begins. Operating these devices and reading unrelated materials while in class is disrespectful of your instructor and fellow classmates. If you fail to abide by this rule, the instructor has the right to confiscate the device or materials. If you have an emergency and need to have your phone turned on during class, ask your instructor for permission

LOGIN INFO

- (1) Go to the website: www.mymathlab.com
- (2) Click on Student's "Register". After that you follow the instructions to register.
- (3) You will need our **COURSE ID**: _____ and an access code given below
- (4) Your access code is:
- (5) Please create your login name as your last name followed by your last four digits of your student ID. For example **mai2011@stu.scu.edu.cn**
- (6) Set your Password.

MATERIAL COVERED: The sequence of the sections covered in this class is:

- (1.) First few weeks, normally 3 weeks: Review limits and differential calculus.
- (2.) Chapter 6.1 – 6.7
- (3.) Chapter 7.1 – 7.9
- (4.) Chapter 9.1 – 9.4
- (5.) Chapter 11.1 – 11.6